CLAIMS

1. Fibre-reinforced moulded article made of a textile planar formation, characterised in that the moulded article contains a matrix which is the re-set product of staple fibres brought to a plastic state of at least one thermoplastic first material, and contains embedded in the matrix aligned fibres in the form of staple fibres of at least one second material, where the softening, melt or decomposition point of the staple fibres of the second material lies above the softening or melt point of the first material, and where the fibre orientation of the second material in the matrix corresponds to the fibre orientation of the textile planar formation.

2. Moulded article according to claim 1, characterised in that the staple fibres of the first material have a mean length of 10 to 150 mm, suitably 30 to 120 mm, preferably 60 to 100 mm and in particular 75 to 85 mm.

3. Moulded article according to claim 1, characterised in that the staple fibres of the second material have a mean length of 10 to 150 mm, suitably 30 to 120 mm, preferably 60 to 100 mm and in particular 75 to 85 mm.

4. Moulded article according to claim 1, characterised in that the staple fibres of the first thermoplastic material contain or consist of polyamide, preferably polyamide 12, polyester, polycarbonate, polyurethane, polyurea, polyolefins, polystyrenes, polyacrylnitrile, polyvinyl chloride, polyvinylidene chloride, polyvinyl alcohol or polytetrafluoroethylene.

5. Moulded article according to claim 1, characterised in that the second material contains or consists of high-temperature-resistant organic staple fibres suitably fully aromatic polyamides, aramides, heterocyclene-

containing aromatic polyamides, polyimides, polyimidamides, polybenzimidazoles, polyoxdiazoles, polytriazoles, polythiadiazoles, polybenzoxazoles, polychinazolidines, poly-bis-benzimidazole-benzophenanthroline or chelated polyterephthaloyl-oxalamidrazone, inorganic staple fibres suitably of glass, slag, stone, ceramic, quartz, silica glass, boron, silicon carbide, boron nitride, boron carbide, aluminium oxide, zirconium oxide, steel, aluminium, tungsten, preferably carbon, graphite or a monocrystalline corundum and silicon carbide, or natural fibres preferably cotton, wool, silk, jute, sisal, coir, linen or hemp.

6. Moulded article according to claim 1, characterised in that the temperature range of the softening, melt or decomposition point of the staple fibres of the second material lies at least 5%, suitably 10% and in particular 30% above the softening or melt point of the first material.

7. Moulded article according to claim 1, characterised in that in the moulded article the staple fibres of the second material, formed as uni-directional layers, bi-directional layers, cut rovings, laid, interlaced, woven or knitted fabrics, are embedded in the matrix which is the re-set product of staple fibres brought to a plastic state of the thermoplastic first material.

8. Moulded article according to claim 1, characterised in that in the moulded article the staple fibres of the second material in relation to the volume account for 40 to 70%, suitably 50 to 60% and preferably 53 to 59%, and correspondingly the matrix of the thermoplastic first material in relation to the volume accounts for 60 to 30%, suitably 50 to 40% and preferably 47 to 41%.

9. Moulded article according to claim 1, characterised in

that the moulded article is the matrix of the thermoplastic first material or materials which contains embedded in the matrix the aligned fibres in the form of staple fibres of the second material or materials, where the fibre orientation of the second material in the matrix corresponds to the fibre orientation of the textile planar formation and the staple fibres of the second material or materials in the matrix are made thinner by stretching than in the textile planar formation.

10. Textile planar formation of aligned fibres in uni-directional layers, bi-directional layers, as cut rovings, laid, woven or knitted fabrics of a mixture of staple fibres of at least two materials, where the staple fibres of at least one thermoplastic first material account for 60 to 30% in relation to volume and the staple fibres of at least one second material account for 40 to 70% in relation to volume, for production of moulded articles according to claim 1.

11. Process for production of moulded articles made from textile planar formations according to claim 1, characterised in that the textile planar formation of aligned fibres in uni-directional layers, bi-directional layers, as cut rovings, laid, woven or knitted fabrics of a mixture of staple fibres of at least two materials, where the staple fibres of at least one thermoplastic first material account for 60 to 30% in relation to the volume and the staple fibres of at least one second material account for 40 to 70% in relation to the volume, is preheated until the first material softens or is melted and is then brought into a tool and deformed into the moulded article under pressure application for forming at constant high temperature of the tool and die which lies in a range below the softening or melt point of the first material.

12. Process for production of moulded articles according to claim 11, characterised in that the preheated textile planar formation is placed in a tool and is deformed into the moulded article under pressure application for forming at a constant high temperature of the tool and die which lies in a range below the softening or melt point of the first material, under stretching and thickness reduction of the staple fibres of the second material while retaining the fibre orientation of the textile material.

13. Process for production of moulded articles according to claim 11, characterised in that the pressure application for moulding is isostatic.

14. Vehicles for water, road or rail or parts thereof, stationary constructions or parts thereof, using moulded articles according to claim 1.